Redundancy module for PSG power supply units, 20 A

Part no.	**PSG480R24RM**
Catalog No.	**172888**
Eaton Catalog No.	**PSG480R24RM**
EL-Nummer (Norway)	**4560886**

Powering Business Worldwide

Delivery program

Product range			Power supplies PSG
Subrange			Redundancy module
Description			For decoupling power supplies of the same type that are connected in parallel on the output side for redundancy purposes
Input voltage range			22 - 60 V DC
Nominal input voltage			24 - 48 V DC
Rated output voltage			V_{in} - 0.65 V
Rated output current		A	20

Technical data

Input characteristics

Nominal input voltage			24 - 48 V DC
Input voltage range		V	24 - 48 V DC
Eingangsspannungsalarm_Relaiskontakt			Relay contact closed "OK" if Vin1 & Vin2 > 18 V +/- 5% and < 30 V
Nominal current	I_n	A	(1+1) Redundanz : Nom. 2 x 12.5 (N+1) Redundanz : Nom. 2 x 10 Einfache Nutzung : Nom. 1 x 20
Back-up fuse			3 x 10, 16 A (recommended)

Output characteristics

Rated output voltage			V_{in} - 0.65 V
Nominal current		A	max. 20
Derating from T_{amb} > +50 °C			> 50 °C (2.5% / °C)
Heat dissipation		W	13
Efficiency		%	97 % norm.
Short-circuit current			< 25 A, no damage

General characteristics

Housing			Aluminium
Status indication			Green LED for "Vin1 OK" & "Vin2 OK" The LED lights up if Vin1 & Vin2 > 18 V +/- 5% and < 30 V
MTBF (mean time between failures)			> 800,000 h
Height		mm	121
Width		mm	50
Depth		mm	122
Weight		kg	0.38
Terminations			Screw connection
Stripping length		mm	7
Terminal capacity			
flexible with ferrules/solid		mm^2	3.3 - 5.3 mm^2 (AWG 12 - 10)
Tightening torque		Nm	0.7
Ambient air temperature range		°C	
Operation		°C	-40 - +80
damp heat			< 95 % relative humidity at +25 °C, no condensation
Vibrations (IEC/EN 60068-2-6)			10 - 500 Hz at 30 m/s^2 (3 G max) for 60 min. in X-axis, Y-axis, Z-axis directions
Mechanical shock resistance (IEC 60068-2-27)			30 g (300 m/s^2) in all directions
Pollution degree			2

Climatic class (IEC)			3K3 according to EN 60721

Safety and safety features

Insulation voltage			
Input/PE			1.5 kV AC
Output/PE			1.5 kV AC
Degree of Protection			IP20
Protection class			Class II with PE connection

Standards

			Electrical equipment of machines: IEC60204-1 (Overvoltage category III) Electronic devices for use in electrical systems: EN 50178/IEC 62103 Safety extra-low voltage: PELV (EN 60204), SELV (EN 60950) Protection against electric shock: DIN 57100-410 CE: In conformance with EMC Directive 2004/108/EC and Low Voltage Directive 2006/95/EC RoHS-compliant: RoHS Directive 2011/65/EU ITE: EN 55022, EN 61000-3-2, EN 61000-3-3, EN 55024 Industrial: EN 55011 Mains harmonics limitation: EN 601000-3-2 Electrical safety (of IT equipment) : UL/c-UL recognized as per UL 60950-1 and CSA C22.2 No. 60950-1, SIQ BG as per EN 60950-1, CB test report as per IEC 60950-1 and CE Industrial control equipment: UL/c-UL listed as per UL 508 and CSA C22.2

Design verification as per IEC/EN 61439

Technical data for design verification			
Rated operational current for specified heat dissipation	I_n	A	0
Heat dissipation per pole, current-dependent	P_{vid}	W	0
Equipment heat dissipation, current-dependent	P_{vid}	W	0
Static heat dissipation, non-current-dependent	P_{vs}	W	13
Heat dissipation capacity	P_{diss}	W	0
Operating ambient temperature min.		°C	-40
Operating ambient temperature max.		°C	80
IEC/EN 61439 design verification			
10.2 Strength of materials and parts			
10.2.2 Corrosion resistance			Meets the product standard's requirements.
10.2.3.1 Verification of thermal stability of enclosures			Meets the product standard's requirements.
10.2.3.2 Verification of resistance of insulating materials to normal heat			Meets the product standard's requirements.
10.2.3.3 Verification of resistance of insulating materials to abnormal heat and fire due to internal electric effects			Meets the product standard's requirements.
10.2.4 Resistance to ultra-violet (UV) radiation			Meets the product standard's requirements.
10.2.5 Lifting			Does not apply, since the entire switchgear needs to be evaluated.
10.2.6 Mechanical impact			Does not apply, since the entire switchgear needs to be evaluated.
10.2.7 Inscriptions			Meets the product standard's requirements.
10.3 Degree of protection of ASSEMBLIES			Meets the product standard's requirements.
10.4 Clearances and creepage distances			Meets the product standard's requirements.
10.5 Protection against electric shock			Does not apply, since the entire switchgear needs to be evaluated.
10.6 Incorporation of switching devices and components			Does not apply, since the entire switchgear needs to be evaluated.
10.7 Internal electrical circuits and connections			Is the panel builder's responsibility.
10.8 Connections for external conductors			Is the panel builder's responsibility.
10.9 Insulation properties			
10.9.2 Power-frequency electric strength			Is the panel builder's responsibility.
10.9.3 Impulse withstand voltage			Is the panel builder's responsibility.
10.9.4 Testing of enclosures made of insulating material			Is the panel builder's responsibility.
10.10 Temperature rise			The panel builder is responsible for the temperature rise calculation. Eaton will provide heat dissipation data for the devices.
10.11 Short-circuit rating			Is the panel builder's responsibility.
10.12 Electromagnetic compatibility			Is the panel builder's responsibility.
10.13 Mechanical function			The device meets the requirements, provided the information in the instruction leaflet (IL) is observed.

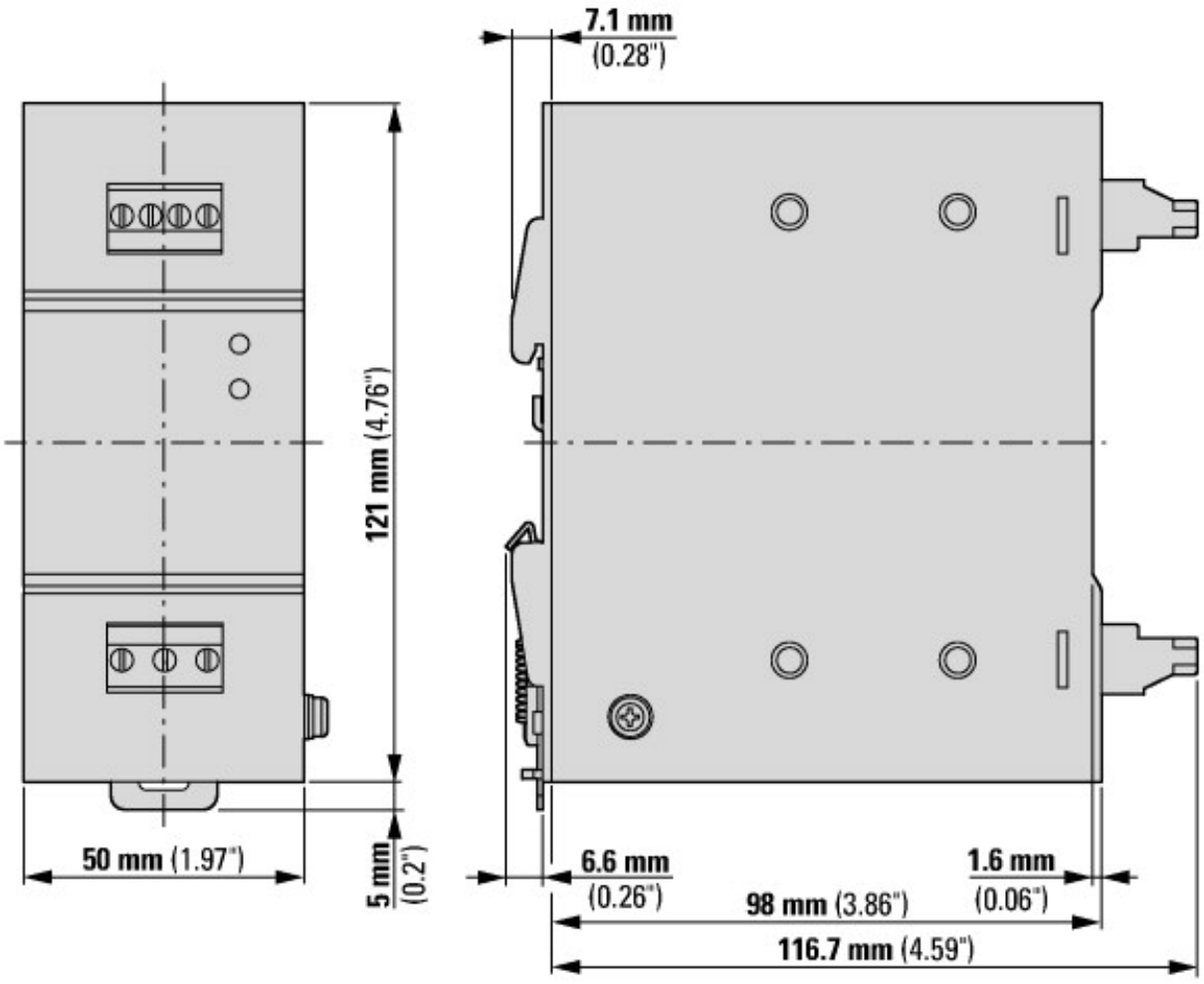
Technical data ETIM 6.0

Low-voltage industrial components (EG000017) / DC-power supply (EC002540)

Electric engineering, automation, process control engineering / Power supply / Power supply (other) / DC-power supply (ecl@ss8.1-27-04-90-02 [AFZ644012])

Voltage type of supply voltage		DC
1st secondary output voltage	V	21.35 - 59.35
2nd secondary output voltage	V	0 - 0
3rd secondary output voltage	V	0 - 0
Max. output current 1	A	20
Max. output current 2	A	0
Max. output current 3	A	0
Secondary voltage adjustable		No
Nominal value output voltage 1	V	24
Nominal value output voltage 2	V	0
Nominal value output voltage 3	V	0
Nominal value output current 1	A	20
Nominal value output current 2	A	0
Nominal value output current 3	A	0
Short-circuit-proof		Yes
Rated supply voltage at AC 50 Hz	V	0 - 0
Rated supply voltage at AC 60 Hz	V	0 - 0
Rated supply voltage at DC	V	22 - 60
Output voltage stabilized		No
Power consumption	VA	0
Power output	W	480
Stabilized		No
Type of electric connection		Screw connection
Rail mounting possible		Yes
Wall mounting possible		No
Modular version		Yes
Width in number of modular spacings		0
Built-in width	mm	50
Built-in height	mm	121
Direct mounting possible		No
Width	mm	50
Height	mm	121
Depth	mm	122
Suitable for safety functions		No
SIL according to IEC 61508		None
Performance level acc. to EN ISO 13849-1		None
Degree of protection (IP)		IP20

Dimensions



Additional product information (links)

IL125017EN Installation Instructions for PSG480R24RM REDUNDANCY MODULE	
IL125017EN Installation Instructions for PSG480R24RM REDUNDANCY MODULE	ftp://ftp.moeller.net/DOCUMENTATION/AWA_INSTRUCTIONS/IL125017EN2014_06.pdf